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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,446	03/04/2002	Shunichi Sekiguchi	2565-0244P	4677

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EXAMINER

LE, VU

ART UNIT PAPER NUMBER

2613

DATE MAILED: 04/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,446

Applicant(s)

SEKIGUCHI ET AL.

Examiner

Vu Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☒ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's amendment overcomes the following objection/rejection:
 - a. Objection to the abstract;
 - b. Objection to figures 42-52. The replacement sheets for figures 42-51 are approved.

Response to Arguments

2. Applicant's arguments filed December 8, 2004 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in: (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent; or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English.

4. Claims 19-21, 23-26, 28-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakaya et al, US 5,963,259 for the same reasons as set forth in the last Office Action.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 22, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakaya et al as applied to claims 19-20 and 25-26 respectively above, and further in view of Ota et al, US 6,236,682 for the same reasons as set forth in the last Office Action.

Response to Remarks

Applicant's assessment regarding the Nakaya et al patent (Amendment, p. 9) is noted. With regards to the decoder, detailed illustration and description are represented by figure 1B and col.1, line 51+. Modifications to the decoder depend upon modifications to the synthesis circuit corresponding to several variations of the encoder circuits.

Regarding claims 19-21, 23-26 and 28-30, applicant asserts that Nakaya's rounding is not the same as the claimed rounding information (Amendment, p. 10). Specifically, there is no disclosure in Nakaya that any information indicating the accuracy of rounding is included in the encoded bitstream of video data, and there is no disclosure that the decoder of Nakaya uses rounding information to indicate accuracy when decoding the video data.

Examiner respectfully disagrees.

In applicant's disclosure (e.g. para 0433), pel position is rounded to the accuracy indicated by the interpolation accuracy indicating data to finally determine pel position. Thus, if interpolation is $\frac{1}{2}$ -pixel, then accuracy of rounding is to $\frac{1}{2}$ -pixel interpolation. If

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interpolation is $\frac{1}{4}$ -pixel, then accuracy of rounding is to $\frac{1}{4}$ -pixel interpolation, and so on. Likewise and as correctly noted by the applicant, rounding in Nakaya relates to the values equal to the nearest integer multiple of $1/D$, where D is an integer. This rounding is carried out by the synthesis circuit 4-2 of the decoder. (See Nakaya, col. 14, line 4 – col. 15, line 11). The synthesis circuit is effectively the equivalent of the interpolation processor in applicant's disclosure.

In Nakaya as noted in the above citation, $fi(x,y)$ and $gi(x,y)$ are defined as followed:

$$fi(x,y)=fi'(x,y)/Di \text{ and } gi(x,y)=gi'(x,y)/Di$$

The symbol "/" as representing a dividing operation between integral values (a dividing operation in which the decimal component of the computation result is discarded). Furthermore, $Fi(x,y)$ and $Gi(x,y)$ are defined as functions for rounding $fi(x,y)$ and $gi(x,y)$ respectively into a value equal to the nearest integer multiple of $1/D$. In the synthesis circuit 4-1 of the video coder 1 and the synthesis circuit 4-2 of the video decoder 2, if $Fi(x,y)$ and $Gi(x,y)$ are used in place of $fi(x,y)$ and $gi(x,y)$, the horizontal and vertical components of the motion vector of each pixel can be restricted to assume only a value equal to an integer multiple of $1/D$ of the distance between adjacent pixels. Also, by using $Fi(x,y)$ and $Gi(x,y)$ for both the sending and the receiving ends (emphasis added), a mismatch of the predicted image P attributable to the error of the transformation function can be prevented in a computation comparatively low in accuracy. Hence, rounding information as represented by $Fi(x,y)$ and $Gi(x,y)$ are communicated via bitstream (inherent) to and from the encoder and decoder.

Regarding claims 22 and 27, no specific issue was raised. Patentability of these claims are contingent upon the merits of their respective independent claims.

For the reasons above, the previous grounds of rejection as set forth in the last Office Action are maintained.

Information Disclosure Statement

7. Applicant indicates that the IDS of March 4th, 2003 was filed and needed to be considered. However, examination of the application file fails to show this particular IDS being part of the record. Examiner notes however that there are prior art references being filed on March 4th, 2002. However, subject matter in these references are not relevant to the subject matter of the present application as filed. Applicant is advised to review these references again and apprise the examiner in the subsequent correspondence.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Le whose telephone number is (571) 272-7332. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. Customer Service can be reached at (571) 272-2600. The fax number for the organization where this application or proceeding is assigned is (571) 273-7332.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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